

REMARKS

The above-identified patent application has been amended and reconsideration and re-examination are respectfully requested.

The Examiner rejected claims 1-12, 21 and 25 under 35 U.S.C. 102(e) as being anticipated by DeMarcken et al., U.S. Patent 6,377,932.

Applicant has amended claim 1 to more particularly point out Applicant's invention. Applicant's claim 1, as now amended, recites ... reducing a larger set of travel options to a smaller set of diverse travel options in accordance with diverse travel requirements that represent conditions for a travel option to be considered for inclusion in the set of diverse travel options. This feature is neither described nor suggested by DeMarcken.

The Examiner takes the position that DeMarcken's teaching of a pricing graph and extracting correspond to a larger set and a smaller set of diverse travel options. While DeMarcken describes extracting from a pricing graph a set of travel options that may be smaller than the set of travel options represented by the pricing graph, this teaching does not describe reducing a larger set to... a smaller set of diverse travel options in accordance with a set of diverse travel requirements.

The Examiner contends that the diverse set of travel requirements were met by the value functions of DeMarcken. [Interview Summary, Paper No. 10, page 3] As described in DeMarcken, "many processes or operations on the pricing graph 38' use a value-function, a function that operates on the terminal nodes of the pricing graph 38' and returns a numerical value that can be used to rank pricing-solutions." [DeMarcken, col. 49, lines 59-63, (emphasis added)]

In contrast, the diverse travel requirements of the applicant's invention ...represent conditions for a travel option to be considered for inclusion in the set of diverse travel options. (emphasis added)

One of the advantages of the applicant's technique if used in a travel planning system is that the system can provide better travel options by maximizing the chance of generating a good

option by enforcing diversity in the set of options generated using the diverse travel requirements.

DeMarken describes that "it may be desirable to enumerate to 100 cheapest solutions that involve a given itinerary or finding the most convenient solution that involves only refundable fares or includes only certain airlines or excludes certain airlines." [DeMarcken, col. 49, lines 53-58, (emphasis added)] Rather than enforcing diversity, DeMarcken teaches the use of value functions and other techniques to eliminate diversity.

Claims 2-9 and 25, which depend directly or indirectly on claim 1, are distinct over DeMarcken at least for the reasons discussed in claim 1.

Claim 10 as amended recites ... selecting one or more travel options from the candidate set of travel options that are best for each of a plurality of travel preference functions and combining the selected one or more travel options for each travel preference function to provide a set of diverse travel options. DeMarcken does not describe these features.

Accordingly claims 10 and claims 11-12, which depend directly or indirectly on claim 10, are distinct over DeMarcken.

Claim 21 as amended recites a travel planning system ... that outputs a set of travel options, smaller than a complete set of travel options that the computer has computed, by pruning the complete set of options to a smaller set with a diversity-based pruning process, wherein the diversity-based pruning process produces at least one travel option in the smaller set that satisfies a first travel requirement and at least one other travel option in the smaller set that satisfies a second travel requirement that is different from the first travel requirement. Such a diversity based pruning process is not described in DeMarcken. Thus, claim 21 is distinct over DeMarcken.

The Examiner rejected claims 13-20 and 22-24 under 35 U.S.C. 103(a) as being obvious over DeMarcken et al., U.S. Patent 6,377,932 in view of Webber U.S. Patent 5,331,546.

Claim 13 as amended recites ... identifying a travel option T1 in the ordered list Ts2 that satisfies the travel requirement R1, identifying a travel option T2 in the ordered list Ts2 that satisfies travel requirement R2 and adding the travel option T1 and the travel option T2 to the diverse list of travel options Rts. These features are neither described nor suggested by the references.

Accordingly claims 13 and claims 14-20, which depend directly or indirectly on claim 10, are distinct over DeMarcken and Webber, alone or in combination.

Claims 22-24, which depend on claim 21 are distinct over the references for the reasons discussed in claim 21, since the references, alone or in combination, do not suggest instructions to prune a larger set of options to a smaller set with a diversity-based pruning process, wherein the diversity-based pruning process produces at least one travel option in the smaller set that satisfies a first travel requirement and at least one other travel option in the smaller set that satisfies a second travel requirement that is different from the first travel requirement.

Applicant has added new claim 26, which recites reducing a larger set of travel options to a smaller set of diverse travel options in accordance with diverse travel requirements that represent conditions for a travel option to be considered for inclusion in the smaller set of diverse travel options, wherein for each of the diverse travel requirements, at least one travel option in the set of diverse travel options represents a best travel option from the larger set of travel options for that specific travel requirement. Neither DeMarcken nor Webber, alone or in combination, teach or suggest this feature. Accordingly claim 26 and claim 27, which depends on claim 26, are distinct over DeMarcken and Webber, alone or in combination.

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With respect to claims 28-38 and 43, neither DeMarcken nor Webber, alone or in combination, teach or suggest for a plurality of travel requirements, selecting one or more travel options for a specified travel requirement that satisfies that specified travel requirement and combining the travel options selected for the plurality of travel requirement to generate the diverse set of travel options.

With respect to claims 39-42 and 44-45, neither DeMarcken nor Webber, alone or in combination, teach or suggest selecting a predefined number of best travel options from the first set where best travel options are selected according to satisfying the first preference function, selecting a predefined number of best travel options from the second set where best travel options are selected according to satisfying the second preference function and combining according to a travel requirement selected ones of the first set and second set of travel options to generate the diverse set of travel options.